

# MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

|     |   |
|-----|---|
| 249 | National Alcohol Awareness Month  |
| 249 | Update: Trends in Fetal Alcohol Syndrome  |
| 251 | Birth Certificates as a Source for FAS Case Ascertainment — Georgia, 1989–1992                              |
| 253 | Use of ICD Coding to Identify FAS — Indian Health Service Facilities, 1981–1992                             |
| 261 | Sociodemographic and Behavioral Characteristics Associated with Alcohol Consumption During Pregnancy — U.S. |
| 264 | Notices to Readers  |
| 266 | Monthly Immunization Table  |

## National Alcohol Awareness Month — April 1995

April is National Alcohol Awareness Month. Maternal alcohol consumption during pregnancy is one of the most common preventable causes of birth defects and childhood disabilities. Varying levels of fetal alcohol exposure result in a spectrum of alcohol-related disabling conditions, including fetal alcohol syndrome (FAS) (with its characteristic physical features) and cognitive and behavioral problems. National health objectives for the year 2000 include reducing the incidence of FAS to no more than 0.12 cases per 1000 live births (i.e., 1.2 cases per 10,000 live births) and increasing abstinence from alcohol drinking by pregnant women by 20% (objectives 14.4 and 14.10) (1). Although adverse health effects associated with fetal exposure to alcohol are preventable, effective intervention strategies are still being developed. An important step toward developing these strategies is improving the understanding of the occurrence and epidemiology of FAS, including determination of population subgroups at increased risk for this condition. This issue of *MMWR* includes four articles related to maternal alcohol consumption during pregnancy and its effects on exposed offspring.

### Reference

1. Public Health Service. Healthy people 2000: national health promotion and disease prevention objectives—full report, with commentary. Washington, DC: US Department of Health and Human Services, Public Health Service, 1991; DHHS publication no. (PHS)91-50212.

## Update: Trends in Fetal Alcohol Syndrome — United States, 1979–1993

Fetal alcohol syndrome (FAS) is characterized by a variety of physical and behavioral traits that result from maternal alcohol consumption during pregnancy. Features of FAS include prenatal or postnatal growth deficiency, characteristic abnormal facial features, and central nervous system deficits (1). Based on data from the national Birth Defects Monitoring Program (BDMP) (2), the rate of reported cases of FAS identified among newborns in the United States during 1979–1992 increased

*Fetal Alcohol Syndrome — Continued*

approximately fourfold (2). This report updates data characterizing the occurrence of FAS through 1993, the latest complete year of data reporting for BDMP.

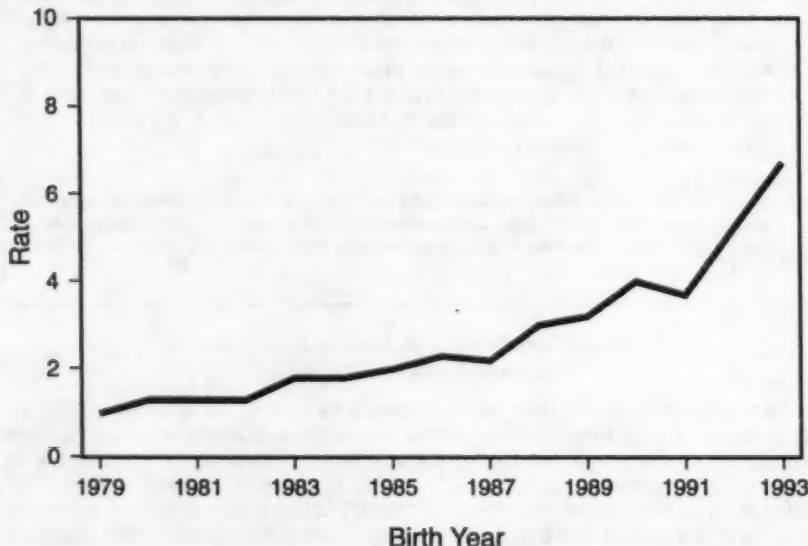
BDMP data are abstracted from hospital discharge data of newborns provided voluntarily by nonfederal, short-term stay hospitals. FAS cases were identified based on coded hospital discharge diagnoses (*International Classification of Diseases, Ninth Revision, Clinical Modification* [ICD-9-CM], code 760.71, "Noxious influences affecting fetus via placenta or breast milk, specifically alcohol; includes fetal alcohol syndrome"). However, this code is not specific for FAS and may reflect maternal alcohol consumption during pregnancy or other adverse effects of alcohol on the fetus. During 1993, the BDMP monitored data on approximately 5% of all births, compared with approximately 30% in 1979.

In 1993, FAS was reported in 126 of 188,905 newborns (rate: 6.7 per 10,000) (Figure 1). Overall, during 1979–1993, FAS was reported in 2032 of 9,434,560 newborns (overall rate: 2.2 per 10,000 births). The rate for 1993 was more than sixfold higher than that for 1979 (1.0 per 10,000 births).

*Reported by: Birth Defects and Genetic Diseases Br, Div of Birth Defects and Developmental Disabilities, National Center for Environmental Health, CDC.*

**Editorial Note:** Although the cause of FAS—alcohol consumption during pregnancy—is preventable, the findings in this report suggest an increasing frequency of this problem. This increase may reflect a true increase in the number of infants with FAS—

**FIGURE 1. Reported rate\* of fetal alcohol syndrome†, by birth year — Birth Defects Monitoring Program, United States, 1979–1993**



\*Per 10,000 births.

†*International Classification of Diseases, Ninth Revision, Clinical Modification*, code 760.71.

*Fetal Alcohol Syndrome — Continued*

the most severe expression of in utero alcohol damage to the fetus—or an increase in the awareness and diagnosis by primary-care clinicians of FAS in newborns.

Although ICD-9-CM code 760.71 is not specific for FAS, it has been used in this analysis because it may reflect a maternal history of alcohol consumption during pregnancy; the diagnosis or suspicion of FAS or its less severe manifestation (fetal alcohol effect); or other alcohol-related birth abnormalities. After the newborn period, this code also may be assigned to children for whom diminished cognitive function or behavioral problems are believed to be associated with maternal alcohol consumption during pregnancy—particularly in older children in whom developmental and neurobehavioral abnormalities are more readily diagnosed.

Studies are under way to better characterize the magnitude of FAS, particularly among population subgroups at increased risk for alcohol consumption during pregnancy and for having an infant with FAS. These studies may enable public health officials to more effectively target FAS prevention and alcohol consumption intervention efforts.

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1. Sokol RJ, Clarren SK. Guidelines for use of terminology describing the impact of prenatal alcohol on the offspring. *Alcohol Clin Exp Res* 1989;13:597-8.
2. CDC. Fetal alcohol syndrome—United States, 1979-1992. *MMWR* 1993;42:339-41.

### **Birth Certificates as a Source for Fetal Alcohol Syndrome Case Ascertainment — Georgia, 1989-1992**

Fetal alcohol syndrome (FAS) is a major cause of preventable mental retardation (1). The development and evaluation of programs for preventing FAS may be enhanced by timely and reliable estimates of the occurrence of this complex birth defect. In 1989, birth certificates were standardized nationally to include check-boxes for reporting FAS and other congenital abnormalities (2). These changes were implemented to improve the potential usefulness of birth certificates for timely and systematic population-based ascertainment of FAS and other abnormal conditions of the newborn (3). To assess the usefulness of birth certificates for surveillance of FAS, the Division of Public Health, Georgia Department of Human Resources (DPH-GDHR), compared information about congenital anomalies from birth certificates to data collected by CDC's Metropolitan Atlanta Congenital Defects Program (MACDP) during 1989-1992. This report summarizes the results of the assessment of FAS.

MACDP is a population-based birth defects registry that identifies children with birth defects diagnosed during the neonatal and infant periods (4). MACDP uses multiple sources (including birth certificates) for identifying birth defect cases and reviews medical and laboratory records of identified cases for verifying case status. Since 1968, MACDP has collected data on approximately 26,000 infants with major congenital anomalies from among nearly 775,000 live-born infants in the five-county area of metropolitan Atlanta. For this study, MACDP was considered the standard for FAS case identification because of its multiple-source case ascertainment, including maternal and infant medical record review within the hospital of birth during the newborn period. Birth certificates were compared with the MACDP registry for

*Birth Certificates — Continued*

sensitivity and predictive value positive (PVP). Potential cases identified by birth certificates were considered true positives if they were registered as FAS in the MACDP registry; potential cases were considered false positives if FAS was noted on the birth certificates but not in the MACDP. Each false-positive case then underwent medical record review to determine whether it had been missed by MACDP.

To determine whether personnel completing birth certificates could have used medical record review to determine an infant's FAS status, the date of diagnosis reported in the MACDP file was compared with the date of birth. If the diagnosis was recorded within 2 days of birth, it was assumed that this information was available to the person completing the birth certificate for inclusion on the birth certificate. For infants included in MACDP with FAS, 86% had FAS diagnosed on the date of birth and 94% within 2 days of birth.

From 1989 through 1992, MACDP identified 35 FAS cases (overall rate: 2.3 per 10,000 births). FAS was noted on the birth certificates of 14 infants. Four of the 14 were true positives, and the other 10 were false positives. The sensitivity of the birth certificates was 11% (four of 35); the PVP was 29% (four of 14). False positives accounted for 71% of cases reported through birth certificates. Birth certificates recorded any maternal alcohol consumption during pregnancy for only five of the 10 false positives, while medical record review of the false positives indicated a specific maternal history of alcohol consumption for only three.

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**Editorial Note:** The findings in this report indicate that birth certificates alone are a poor source for FAS case surveillance. In Georgia, birth certificates underreported FAS cases as well as incorrectly identified FAS cases. These findings underscore the need for improving the quality of diagnostic information for FAS on birth certificates. For 86% of MACDP-enrolled FAS cases, the information used to verify FAS status was recorded on the day of birth, suggesting that correct information about FAS status could be obtained and recorded on birth certificates if personnel completing the vital record routinely reviewed diagnoses contained in birth charts.

The high rate (71%) of false positives reported on birth certificates in this report represents an over-reporting of FAS without indication of physical findings from medical records to substantiate the report. Maternal history of alcohol consumption during pregnancy may be considered sufficient evidence by some health professionals for a diagnosis of FAS on the birth certificate. However, FAS is a complex birth syndrome with specific physical and developmental findings; maternal alcohol consumption during pregnancy is essential but not sufficient for a diagnosis of FAS.

In the United States, birth defects are the leading cause of infant mortality (5), emphasizing the necessity of accurate information on birth defects for public health assessment. To improve the usefulness of birth certificates for birth defects surveillance and other public health needs, however, the quality of birth certificate data will need to be improved.

The data for more accurate diagnosis and reporting of FAS and other abnormal conditions of the newborn often are available from the medical record, and

*Birth Certificates — Continued*

consultation of these records before completion of the birth certificate may improve the quality and utility of birth certificate data. Pediatricians should be enlisted to provide information about the conditions of the newborn while obstetricians continue to provide information about conditions of the mother (6). In addition, birthing hospitals should consider developing more specific protocols for completing birth certificates and instituting a formal process for evaluating the accuracy of reporting birth certificate information.

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1. Abel EL, Sokol RJ. Incidence of fetal alcohol syndrome and economic impact of FAS-related anomalies. *Drug Alcohol Depend* 1987;19:51-70.
2. Freedman MA, Gay GA, Brockert JE, et al. The 1989 revisions of the US Standard Certificates of Live Birth and Death and the US Standard Report of Fetal Death. *Am J Public Health* 1988;78:168-72.
3. Taffel SM, Ventura SJ, Gay GA. Revised U.S. Certificate of Birth: new opportunities for research on birth outcome. *Birth* 1989;16:188-93.
4. Lynberg MC, Edmonds LD. Surveillance of birth defects. In: Halperin W, Baker EL, Monson RR, eds. *Public Health Surveillance*. New York: Van Nostrand Reinhold, 1992.
5. CDC. Contribution of birth defects to infant mortality—United States, 1986. *MMWR* 1989;38: 633-5.
6. Hextler AC, Harris JA. Bias in congenital malformations information from the birth certificate. *Teratology* 1991;44:177-80.

### **Use of International Classification of Diseases Coding to Identify Fetal Alcohol Syndrome — Indian Health Service Facilities, 1981-1992**

Fetal alcohol syndrome (FAS) is one of the leading causes of preventable birth defects and developmental disabilities in the United States (1). Since 1979, surveillance systems for estimating and tracking FAS have categorized cases using *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM), code 760.71 (2). This code comprises noxious influences affecting the fetus or newborn through placenta or breast milk, specifically alcohol, and includes FAS. Because the code is not specific for FAS and may reflect maternal alcohol consumption during pregnancy or other adverse effects of alcohol on the fetus, CDC assessed the usefulness of this code in ascertaining FAS cases by reviewing medical records for 1981-1993 from the Aberdeen Area\* Indian Health Service (IHS) and IHS contract facilities in eight of the 19 tribal or American Indian communities in the area. This report summarizes the findings of the analysis.

During June-July 1993, IHS medical records with the diagnostic code 760.71 were abstracted. Data were collected from records of persons who were inpatients during 1981-1991 and from the records of outpatients during August 1, 1989-July 12, 1993. A case of FAS was defined as documentation of the following five criteria in a person's medical records: 1) prenatal alcohol exposure or maternal history of alcohol consumption, 2) FAS diagnosed or noted as a suspected diagnosis by a physician, 3) one or more facial features characteristic of FAS, 4) growth deficiency (i.e., prenatal or postnatal height or weight  $\leq 10$ th percentile for age), and 5) central nervous system (CNS)

\*Iowa, Nebraska, North Dakota, and South Dakota (1990 total American Indian population: 84,280).

*International Classification of Diseases Coding — Continued*

impairment (3). Maternal medical records were not reviewed in this study. During 1981–1992, a total of 19,000 infants were born in the Aberdeen area.

During 1981–1992, medical records of 251 persons had the diagnostic code 760.71; 60 (24%) persons met all five criteria for FAS (Table 1). Of the 60 persons with FAS, the mean age was 8 years (range: birth–31 years); 58% were male. Of the 60 case-patients, 52 (87%) were born during 1981–1992; based on the 19,000 deliveries during 1981–1992, the rate of FAS was 2.7 per 1000 live births during this period.

The most common facial features documented in the medical records of the 60 case-patients were long and flat philtrum (60%); low nasal bridge (52%), short palpebral fissures (42%); thin upper lip (30%); and midface hypoplasia (28%). The most common CNS impairments were microcephaly (45%), developmental delay (45%), speech or language delay (40%), delayed gross motor development (32%), hyperactivity (30%), seizures (25%), delayed fine motor development (23%), and attention deficit disorder (20%).

Of the 57 cases for which data were available, low birthweight (<2500 g [ $<5$  lbs, 8 oz]) was documented in 21 (37%). Of the 47 cases for which data were available, 16 (34%) were small for gestational age (i.e., birthweight  $\leq 10$ th percentile for gestational age). For 41 (68%) of the 60 cases, postnatal growth deficiency had been documented in the medical records. Based on the review of records, dysmorphologists had independently examined 18 (30%) of the 60 case-patients and diagnosed FAS in 14 of these persons.

Of the 191 persons whose medical records included the diagnostic code 760.71 but who did not meet all five criteria of the study case definition, one or more of the clinical signs of FAS were present in 168 (88%). A dysmorphologist had diagnosed FAS in 15 of these persons. For 23 persons whose medical records included the

**TABLE 1. Number and percentage of persons whose medical records had ICD-9-CM code 760.71\* and who met any of the five study case criteria for fetal alcohol syndrome (FAS), by case criterion and number of criteria met — Aberdeen Area† Indian Health Service (IHS),‡ 1981–1992**

| Case criterion <sup>§</sup>  | No. case criteria met |                |           |                |           |                |           |                |           |                | Total      |                  |
|--|-----------------------|----------------|-----------|----------------|-----------|----------------|-----------|----------------|-----------|----------------|------------|------------------|
|  | Five                  |                | Four      |                | Three     |                | Two       |                | One       |                |            |                  |
|  | No.                   | (%)            | No.       | (%)            | No.       | (%)            | No.       | (%)            | No.       | (%)            | No         | (%)              |
| Prenatal alcohol exposure/<br>maternal history of<br>alcohol consumption | 60                    | (100.0)        | 52        | ( 85.2)        | 38        | ( 73.1)        | 16        | ( 39.0)        | 11        | ( 39.3)        | 177        | ( 70.5)          |
| FAS diagnosed or<br>suspected by a physician                             | 60                    | (100.0)        | 48        | ( 78.7)        | 17        | ( 32.7)        | 11        | ( 26.8)        | 3         | ( 10.7)        | 139        | ( 55.4)          |
| One or more facial<br>features of FAS                                    | 60                    | (100.0)        | 35        | ( 57.4)        | 21        | ( 40.4)        | 9         | ( 22.0)        | 1         | ( 3.6)         | 126        | ( 50.2)          |
| Growth deficiency  | 60                    | (100.0)        | 51        | ( 83.6)        | 34        | ( 65.4)        | 18        | ( 43.9)        | 7         | ( 25.0)        | 170        | ( 67.7)          |
| Central nervous system<br>impairment                                     | 60                    | (100.0)        | 58        | ( 95.1)        | 46        | ( 88.5)        | 28        | ( 68.3)        | 6         | ( 21.4)        | 198        | ( 78.9)          |
| <b>Total</b>   | <b>60</b>             | <b>(100.0)</b> | <b>61</b> | <b>(100.0)</b> | <b>52</b> | <b>(100.0)</b> | <b>41</b> | <b>(100.0)</b> | <b>26</b> | <b>(100.0)</b> | <b>251</b> | <b>(100.0)**</b> |

\*International Classification of Diseases, Ninth Revision, Clinical Modification, "Noxious influences affecting fetus or newborn via placenta or breast milk, specifically alcohol; including fetal alcohol syndrome."

†Iowa, Nebraska, North Dakota, and South Dakota.

‡IHS and IHS contract facilities in eight of the 19 tribal or American Indian communities in the Aberdeen area.

§Categories are not mutually exclusive.

\*\*Nine persons whose medical records included diagnostic code 760.71 were not documented to have any of the five study case criteria.



*International Classification of Diseases Coding — Continued*

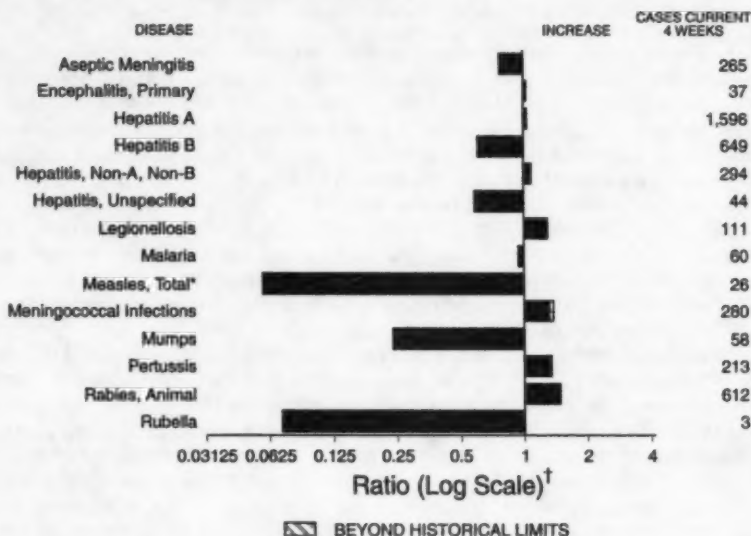
diagnostic code 760.71, none of the typical physical findings associated with in utero exposure to alcohol were documented in their records.

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**Editorial Note:** The rate of FAS for American Indians is higher than for other racial/ethnic groups in the United States (4). The estimated rate of FAS for American Indians in the Aberdeen area during 1981–1992 (2.7 per 1000 live births) was similar to the rate reported for Alaskan Natives during 1978–1991 (2.1) (3). Population-based screening studies during 1980–1982 documented rates of FAS for American Indians as 1.4 per 1000 live births for Navajo, 2.0 for Pueblo, and 9.8 for American Indians of the Southwest plains (5). The rate of FAS in the IHS study was substantially lower than that estimated by a prospective follow-up study of American Indian children in whom FAS was diagnosed by dysmorphologists (8.5) (6). The variability in rates in these studies may reflect the use of different diagnostic criteria or case-finding methodologies or real differences in rates for the population subgroups.

The findings in this report indicate that only a small proportion of medical records in the IHS study coded 760.71 represented cases that met the rigorous case definition for FAS. However, the code can be useful in assessing the rate of adverse effects of maternal alcohol consumption during pregnancy. In this study, 76% of the persons with medical records coded 760.71 did not meet the diagnostic criteria for FAS; however, most (79%) had substantial developmental and behavioral problems that could be related to maternal alcohol consumption during pregnancy. The findings that high proportions of these persons had growth deficiencies, CNS impairment, or documented maternal alcohol consumption during pregnancy suggest that the ICD-9-CM code 760.71 may be a marker for problems in children associated with in utero exposure to alcohol. The finding that maternal alcohol consumption was not documented in the medical records of 30% of patients may reflect failure to record this information or failure to ask the mother about alcohol consumption during pregnancy.

Because surveillance systems using ICD-9-CM code 760.71 lack specificity for monitoring FAS, calculation of accurate population estimates of FAS is complex and difficult. However, use of these surveillance systems should be continued because of the importance of measuring the overall adverse effects of in utero exposure to alcohol. Approaches to enhance surveillance for adverse effects of maternal alcohol consumption on the fetus should be expanded to include multiple data sources, such as hospital discharge data from the newborn period (similar to data used by CDC's Birth Defects Monitoring Program) and insurance claims data for clinic visits. Use of Medicaid and other insurance claims may be an inexpensive method of monitoring FAS and other outcomes related to maternal alcohol consumption during pregnancy in the general population and in patients with documented in utero exposure to alcohol. Accurate surveillance data will help target screening and prevention efforts to those women whose children are at greatest risk for adverse sequelae from in utero alcohol exposure.

**FIGURE I. Notifiable disease reports, comparison of 4-week totals ending April 1, 1995, with historical data — United States**

\*The large apparent decrease in the number of reported cases of measles (total) reflects dramatic fluctuations in the historical baseline.

<sup>†</sup>Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

**TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending April 1, 1995 (13th Week)**

|                               | Cum. 1995 |   | Cum. 1995 |
|-------------------------------|-----------|---|-----------|
| Anthrax                       | -         | Plague  | -         |
| Aseptic Meningitis            | 1,637     | Poliomyelitis, Paralytic                        | -         |
| Brucellosis                   | 12        | Psittacosis                                     | 10        |
| Cholera                       | -         | Rabies, human                                   | 1         |
| Congenital rubella syndrome   | 2         | Rocky Mountain Spotted Fever                    | 25        |
| Diphtheria                    | -         | Syphilis, congenital, age < 1 year <sup>†</sup> | -         |
| Encephalitis, primary         | 118       | Tetanus   | 6         |
| Encephalitis, post-infectious | 21        | Toxic shock syndrome                            | 52        |
| Haemophilus influenzae*       | 385       | Trichinosis                                     | 9         |
| Hansen Disease                | 28        | Tularemia                                       | 5         |
| Hepatitis, unspecified        | 100       | Typhoid fever                                   | 66        |
| Leptospirosis                 | 13        |   |           |

\*Of 359 cases of known age, 85 (24%) were reported among children less than 5 years of age.

<sup>†</sup>Updated quarterly from reports to the Division of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Services. First quarter data not yet available.

-: no reported cases



TABLE II. Cases of selected notifiable diseases, United States, weeks ending April 1, 1995, and April 2, 1994 (13th Week)

| Reporting Area | AIDS*  | Gonorrhea |           | Hepatitis (Viral), by type |           |           |           |           |           | Legionellosis |           |
|----------------|--------|-----------|-----------|----------------------------|-----------|-----------|-----------|-----------|-----------|---------------|-----------|
|                |        |           |           | A                          |           | B         |           | NA,NB     |           |               |           |
|                |        | Cum. 1995 | Cum. 1996 | Cum. 1994                  | Cum. 1995 | Cum. 1994 | Cum. 1995 | Cum. 1994 | Cum. 1995 | Cum. 1994     | Cum. 1995 |
| UNITED STATES  | 19,852 | 88,504    | 93,184    | 5,605                      | 5,087     | 1,924     | 2,973     | 830       | 1,093     | 312           | 350       |
| NEW ENGLAND    | 842    | 1,358     | 2,033     | 39                         | 72        | 48        | 118       | 26        | 37        | 4             | 4         |
| Maine          | 23     | 20        | 14        | 6                          | 11        | 2         | 3         | -         | -         | -             | -         |
| N.H.           | 38     | 30        | 19        | 2                          | 3         | 5         | 6         | 3         | 5         | -             | -         |
| Vt.            | 7      | 10        | 7         | -                          | -         | 1         | 4         | -         | 4         | -             | -         |
| Mass.          | 457    | 796       | 764       | 17                         | 32        | 14        | 85        | 22        | 21        | 3             | 1         |
| R.I.           | 59     | 151       | 106       | 7                          | 12        | 7         | 3         | 1         | 7         | 1             | 3         |
| Conn.          | 258    | 351       | 1,123     | 7                          | 14        | 19        | 17        | -         | -         | N             | N         |
| MID. ATLANTIC  | 4,550  | 9,265     | 11,204    | 271                        | 365       | 206       | 344       | 89        | 137       | 30            | 37        |
| Update N.Y.    | 521    | 1,392     | 2,278     | 77                         | 110       | 79        | 98        | 41        | 63        | 8             | 10        |
| N.Y. City      | 2,342  | 2,614     | 4,459     | 115                        | 145       | 41        | 73        | 1         | 1         | -             | -         |
| N.J.           | 1,112  | 1,196     | 1,365     | 45                         | 72        | 53        | 92        | 37        | 61        | 6             | 7         |
| Pa.            | 575    | 3,863     | 3,102     | 34                         | 38        | 35        | 81        | 10        | 12        | 16            | 20        |
| E.N. CENTRAL   | 1,622  | 20,043    | 16,938    | 778                        | 507       | 207       | 359       | 54        | 100       | 82            | 137       |
| Ohio           | 409    | 6,532     | 6,081     | 519                        | 135       | 24        | 49        | 3         | 2         | 39            | 51        |
| Ind.           | 106    | 2,039     | 1,946     | 41                         | 91        | 53        | 57        | -         | 3         | 17            | 45        |
| Ill.           | 737    | 5,491     | 2,992     | 86                         | 161       | 23        | 93        | 9         | 32        | 6             | 7         |
| Mich.          | 278    | 4,950     | 4,236     | 96                         | 68        | 104       | 98        | 42        | 63        | 14            | 24        |
| Wis.           | 92     | 1,031     | 1,683     | 36                         | 52        | 3         | 64        | -         | -         | 6             | 10        |
| W.N. CENTRAL   | 427    | 4,889     | 5,536     | 235                        | 241       | 132       | 161       | 24        | 13        | 33            | 25        |
| Minn.          | 93     | 786       | 860       | 21                         | 42        | 9         | 12        | -         | 2         | -             | -         |
| Iowa           | 20     | 399       | 367       | 11                         | 8         | 12        | 8         | 2         | 2         | 7             | 16        |
| Mo.            | 148    | 2,909     | 2,927     | 162                        | 129       | 94        | 124       | 16        | 2         | 23            | 4         |
| N. Dak.        | 1      | 3         | 7         | 5                          | 1         | -         | -         | -         | -         | 2             | 2         |
| S. Dak.        | 1      | 49        | 42        | 3                          | 9         | 1         | -         | -         | -         | -             | -         |
| Nebr.          | 43     | -         | 328       | 9                          | 32        | 6         | 5         | 2         | 3         | -             | 2         |
| Kans.          | 121    | 743       | 1,005     | 24                         | 20        | 9         | 12        | 3         | 4         | 1             | 1         |
| S. ATLANTIC    | 5,708  | 27,007    | 25,133    | 277                        | 320       | 305       | 652       | 72        | 223       | 45            | 72        |
| Del.           | 113    | 526       | 429       | 3                          | 7         | 2         | 3         | 1         | 1         | -             | -         |
| Md.            | 978    | 3,246     | 4,786     | 52                         | 49        | 51        | 90        | 3         | 12        | 11            | 16        |
| D.C.           | 373    | 1,334     | 1,608     | 2                          | 8         | 8         | 13        | -         | -         | 3             | -         |
| Va.            | 374    | 2,898     | 3,192     | 58                         | 33        | 29        | 27        | -         | 13        | 2             | 2         |
| W. Va.         | 21     | 200       | 185       | 7                          | 3         | 19        | 7         | 15        | 8         | 3             | 1         |
| N.C.           | 248    | 6,270     | 6,312     | 25                         | 26        | 87        | 81        | 17        | 17        | 7             | 6         |
| S.C.           | 280    | 2,578     | 3,132     | 8                          | 7         | 9         | 12        | -         | 1         | 7             | 1         |
| Ge.            | 594    | 4,131     | U         | 36                         | 21        | 28        | 297       | 10        | 142       | 6             | 32        |
| Fla.           | 2,727  | 5,424     | 5,489     | 89                         | 166       | 72        | 122       | 26        | 29        | 6             | 14        |
| E.S. CENTRAL   | 612    | 10,254    | 8,258     | 112                        | 109       | 113       | 318       | 168       | 224       | 6             | 17        |
| Ky.            | 63     | 1,236     | 1,109     | 11                         | 63        | 13        | 33        | 4         | 5         | 1             | 3         |
| Tenn.          | 269    | 1,361     | 3,232     | 50                         | 34        | 69        | 267       | 161       | 217       | 2             | 10        |
| Ala.           | 159    | 5,478     | 3,917     | 38                         | 12        | 31        | 18        | 1         | 2         | 2             | 4         |
| Miss.          | 121    | 2,181     | U         | 13                         | U         | -         | U         | -         | U         | 1             | U         |
| W.S. CENTRAL   | 1,404  | 8,104     | 10,236    | 565                        | 658       | 274       | 274       | 118       | 80        | 3             | 11        |
| Ark.           | 64     | 879       | 1,751     | 21                         | 12        | 2         | 6         | -         | -         | -             | 4         |
| La.            | 299    | 3,015     | 3,434     | 16                         | 17        | 18        | 28        | 24        | 19        | 1             | -         |
| Okla.          | 84     | 378       | 795       | 121                        | 56        | 103       | 90        | 88        | 46        | 2             | 7         |
| Tex.           | 957    | 3,832     | 4,256     | 407                        | 573       | 151       | 150       | 6         | 14        | -             | -         |
| MOUNTAIN       | 637    | 2,060     | 5,386     | 1,062                      | 869       | 184       | 139       | 120       | 97        | 66            | 28        |
| Mont.          | 8      | 24        | 29        | 19                         | 9         | 6         | 5         | 6         | -         | 2             | 9         |
| Idaho          | 17     | 34        | 17        | 112                        | 88        | 19        | 22        | 11        | 32        | 1             | -         |
| Wyo.           | 4      | 10        | 25        | 42                         | 5         | 3         | 5         | 47        | 19        | -             | 1         |
| Colo.          | 214    | 790       | 864       | 151                        | 110       | 28        | 28        | 23        | 20        | 20            | 4         |
| N. Mex.        | 69     | 265       | 259       | 231                        | 250       | 59        | 46        | 18        | 11        | 2             | 1         |
| Ariz.          | 133    | 776       | 3,668     | 217                        | 263       | 25        | 16        | 9         | 4         | 33            | 1         |
| Utah           | 37     | 39        | 95        | 273                        | 101       | 17        | 7         | 3         | 7         | 2             | -         |
| Nev.           | 155    | 122       | 439       | 37                         | 43        | 7         | 10        | 3         | 4         | 6             | 10        |
| PACIFIC        | 3,850  | 5,524     | 8,460     | 2,245                      | 1,946     | 473       | 608       | 161       | 182       | 43            | 21        |
| Wash.          | 360    | 672       | 804       | 130                        | 261       | 39        | 60        | 45        | 64        | -             | 5         |
| Oreg.          | 122    | 18        | 289       | 399                        | 99        | 22        | 17        | 8         | 2         | -             | -         |
| Calif.         | 3,251  | 4,470     | 6,956     | 1,653                      | 1,512     | 405       | 509       | 99        | 113       | 39            | 15        |
| Alaska         | 29     | 219       | 213       | 14                         | 62        | 2         | 5         | 1         | -         | -             | -         |
| Hawaii         | 78     | 145       | 196       | 49                         | 12        | 5         | 17        | 8         | 3         | 4             | 1         |
| Guam           | -      | 12        | 38        | -                          | 1         | -         | -         | -         | -         | -             | 2         |
| P.R.           | 649    | 119       | 132       | 15                         | 13        | 176       | 67        | 161       | 24        | -             | -         |
| V.I.           | 14     | 3         | 8         | -                          | -         | 1         | 1         | -         | -         | -             | -         |
| Amer. Samoa    | -      | 8         | 7         | 5                          | 2         | -         | -         | -         | -         | -             | -         |
| C.N.M.I.       | -      | 2         | 16        | 1                          | 1         | -         | -         | -         | -         | -             | -         |

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

\*Updated monthly to the Division of HIV/AIDS, National Center for Infectious Diseases; last update March 30, 1995.

**TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending April 1, 1995, and April 2, 1994 (13th Week)**

| Reporting Area | Lyme Disease |           | Malaria   |           | Measles (Rubella) |      |           |      |           |           | Meningococcal Infections |           | Mumps     |           |
|----------------|--------------|-----------|-----------|-----------|-------------------|------|-----------|------|-----------|-----------|--------------------------|-----------|-----------|-----------|
|                |              |           |           |           | Indigenous        |      | Imported* |      | Total     |           |                          |           |           |           |
|                | Cum. 1995    | Cum. 1994 | Cum. 1995 | Cum. 1994 | 1995              | 1995 | 1995      | 1995 | Cum. 1995 | Cum. 1994 | Cum. 1995                | Cum. 1994 | Cum. 1995 | Cum. 1994 |
| UNITED STATES  | 840          | 904       | 215       | 259       | 1                 | 58   | 1         | 3    | 61        | 159       | 863                      | 861       | 195       | 351       |
| NEW ENGLAND    | 34           | 94        | 13        | 24        | -                 | 2    | -         | 1    | 3         | 6         | 80                       | 42        | 3         | 9         |
| Maine          | 1            | -         | 1         | 1         | -                 | -    | -         | -    | -         | -         | 3                        | 6         | 2         | 3         |
| N.H.           | 3            | 5         | 1         | 3         | -                 | -    | -         | -    | -         | -         | 12                       | 1         | -         | 3         |
| Vt.            | 1            | 1         | -         | 1         | -                 | -    | -         | -    | -         | -         | 5                        | 1         | -         | -         |
| Mass.          | 28           | 18        | 2         | 7         | -                 | -    | -         | 1    | 1         | 1         | 22                       | 14        | -         | -         |
| R.I.           | 1            | 14        | 2         | 4         | -                 | 2    | -         | -    | 2         | 3         | -                        | -         | -         | 1         |
| Conn.          | -            | 56        | 7         | 8         | -                 | -    | -         | -    | -         | 2         | 18                       | 20        | 1         | 2         |
| MID. ATLANTIC  | 656          | 650       | 47        | 36        | -                 | 1    | -         | -    | 1         | 66        | 80                       | 74        | 25        | 32        |
| Upstate N.Y.   | 397          | 528       | 9         | 10        | -                 | -    | -         | -    | 4         | 32        | 30                       | 9         | 4         | 4         |
| N.Y. City      | 2            | 10        | 20        | 9         | -                 | 1    | -         | -    | 1         | 1         | 9                        | 3         | 2         | -         |
| N.J.           | 47           | 83        | 12        | 13        | -                 | -    | -         | -    | 60        | 21        | 21                       | 21        | -         | 6         |
| Pa.            | 210          | 31        | 6         | 4         | -                 | -    | -         | -    | -         | 1         | 18                       | 20        | 14        | 22        |
| E.N. CENTRAL   | 14           | 7         | 18        | 31        | -                 | -    | -         | -    | -         | 15        | 110                      | 133       | 30        | 94        |
| Ohio           | 13           | 3         | 1         | 3         | -                 | -    | -         | -    | -         | 10        | 34                       | 31        | 15        | 8         |
| Ind.           | 1            | -         | 2         | 9         | -                 | -    | -         | -    | -         | 1         | 18                       | 25        | 1         | 3         |
| Ill.           | -            | 3         | 13        | 10        | -                 | -    | -         | -    | -         | -         | 34                       | 42        | 4         | 64        |
| Mich.          | -            | 1         | 2         | 8         | -                 | -    | -         | -    | -         | 1         | 20                       | 14        | 10        | 17        |
| Wis.           | -            | -         | -         | 1         | -                 | -    | -         | -    | -         | 3         | 4                        | 21        | -         | 2         |
| W.N. CENTRAL   | 13           | 18        | 7         | 14        | -                 | -    | -         | -    | -         | 1         | 50                       | 65        | 13        | 13        |
| Minn.          | -            | 4         | 3         | 4         | -                 | -    | -         | -    | -         | -         | 10                       | 5         | 2         | -         |
| Iowa           | 1            | 1         | -         | 3         | -                 | -    | -         | -    | -         | -         | 9                        | 5         | 3         | 3         |
| Mo.            | 2            | 9         | 3         | 4         | -                 | -    | -         | -    | -         | -         | 17                       | 37        | 6         | 9         |
| N. Dak.        | -            | -         | -         | -         | -                 | -    | -         | -    | -         | -         | -                        | -         | -         | 1         |
| S. Dak.        | -            | -         | -         | -         | -                 | -    | -         | -    | -         | -         | -                        | 4         | -         | -         |
| Nebr.          | -            | -         | 1         | 2         | -                 | -    | -         | -    | -         | 1         | 6                        | 4         | 2         | -         |
| Kans.          | 10           | 2         | -         | 1         | -                 | -    | -         | -    | -         | -         | 8                        | 10        | -         | -         |
| S. ATLANTIC    | 86           | 103       | 52        | 64        | -                 | -    | -         | -    | -         | 4         | 159                      | 139       | 31        | 50        |
| Dal.           | 1            | 11        | 1         | 2         | -                 | -    | -         | -    | -         | -         | 2                        | 2         | -         | -         |
| Md.            | 62           | 30        | 17        | 27        | -                 | -    | -         | -    | -         | -         | 7                        | 9         | -         | 12        |
| D.C.           | -            | -         | 3         | 7         | -                 | -    | -         | -    | -         | -         | 1                        | 1         | -         | -         |
| Va.            | 2            | 11        | 10        | 8         | -                 | -    | -         | -    | -         | 1         | 24                       | 20        | 8         | 14        |
| W. Va.         | 6            | 3         | -         | -         | -                 | -    | -         | -    | -         | -         | 3                        | 6         | -         | 2         |
| N.C.           | 7            | 18        | 4         | 2         | -                 | -    | -         | -    | -         | -         | 23                       | 28        | 15        | 19        |
| S.C.           | 4            | -         | -         | 1         | -                 | -    | -         | -    | -         | -         | 23                       | 5         | 3         | 5         |
| Ga.            | 4            | 29        | 7         | 9         | -                 | -    | -         | -    | -         | -         | 42                       | 22        | -         | 3         |
| Fla.           | -            | 1         | 10        | 8         | -                 | -    | -         | -    | -         | 3         | 34                       | 48        | 5         | 4         |
| E.S. CENTRAL   | 3            | 7         | 2         | 6         | -                 | -    | -         | -    | -         | 27        | 45                       | 53        | 8         | -         |
| Ky.            | 1            | 5         | -         | 2         | -                 | -    | -         | -    | -         | -         | 17                       | 14        | -         | -         |
| Tenn.          | 1            | 1         | -         | 3         | -                 | -    | -         | -    | -         | 27        | 6                        | 13        | 4         | -         |
| Ala.           | -            | 1         | 2         | 1         | -                 | -    | -         | -    | -         | -         | 14                       | 28        | 2         | -         |
| Miss.          | 1            | U         | -         | U         | -                 | -    | -         | -    | -         | U         | 8                        | U         | 2         | U         |
| W.S. CENTRAL   | 14           | 6         | 6         | 6         | -                 | 2    | -         | -    | 2         | 6         | 99                       | 101       | 9         | 73        |
| Ark.           | -            | -         | 2         | -         | -                 | 2    | -         | -    | -         | -         | 8                        | 11        | -         | -         |
| La.            | -            | -         | 1         | -         | -                 | -    | -         | -    | -         | -         | 14                       | 18        | 2         | 6         |
| Okla.          | 11           | 5         | -         | 1         | -                 | -    | -         | -    | -         | -         | 9                        | 7         | -         | 20        |
| Tex.           | 3            | 1         | 3         | 5         | -                 | -    | -         | -    | -         | 6         | 88                       | 65        | 7         | 47        |
| MOUNTAIN       | 2            | 4         | 15        | 7         | 1                 | 39   | -         | -    | 39        | 26        | 72                       | 66        | 13        | 8         |
| Mont.          | -            | -         | 1         | -         | -                 | -    | -         | -    | -         | -         | 2                        | 2         | -         | -         |
| Idaho          | -            | 1         | -         | 2         | -                 | 1    | -         | -    | 1         | -         | 1                        | 10        | 1         | 3         |
| Wyo.           | -            | -         | -         | -         | -                 | -    | -         | -    | -         | -         | 2                        | 2         | -         | -         |
| Colo.          | 1            | -         | 8         | 3         | -                 | -    | -         | -    | -         | -         | 18                       | 6         | 1         | -         |
| N. Mex.        | -            | 3         | 3         | 1         | -                 | 27   | -         | -    | 27        | -         | 18                       | 5         | N         | N         |
| Ariz.          | -            | -         | 2         | -         | 1                 | 10   | -         | -    | 10        | -         | 25                       | 25        | 3         | -         |
| Utah           | -            | -         | 1         | 1         | -                 | -    | -         | -    | -         | 26        | 2                        | 12        | 1         | 2         |
| Nev.           | 1            | -         | -         | -         | -                 | 1    | -         | -    | 1         | -         | 3                        | 4         | 6         | 3         |
| PACIFIC        | 18           | 17        | 55        | 71        | -                 | 14   | 1         | 2    | 16        | 8         | 188                      | 188       | 63        | 63        |
| Wash.          | -            | -         | 6         | 5         | -                 | 13   | 1         | 1    | 14        | -         | 29                       | 35        | 3         | 6         |
| Oreg.          | 1            | -         | 4         | 5         | -                 | 1    | -         | -    | 1         | -         | 34                       | 35        | N         | N         |
| Calif.         | 17           | 17        | 41        | 54        | -                 | -    | -         | -    | -         | 8         | 123                      | 113       | 53        | 52        |
| Alaska         | -            | -         | 1         | -         | -                 | -    | -         | -    | -         | -         | -                        | 1         | 6         | 2         |
| Hawaii         | -            | -         | 3         | 7         | -                 | -    | -         | 1    | 1         | -         | 2                        | 4         | 1         | 3         |
| Guam           | -            | -         | -         | -         | U                 | -    | U         | -    | -         | 15        | 1                        | -         | -         | 2         |
| P.R.           | -            | -         | -         | -         | -                 | 3    | -         | -    | 3         | 14        | 10                       | 4         | -         | 2         |
| V.I.           | -            | -         | -         | -         | U                 | -    | U         | -    | -         | -         | -                        | -         | 1         | -         |
| Amer. Samoa    | -            | -         | -         | -         | -                 | -    | -         | -    | -         | -         | -                        | -         | -         | 1         |
| C.N.M.I.       | -            | -         | -         | 1         | U                 | -    | U         | -    | -         | 26        | -                        | -         | -         | -         |

\*For imported measles, cases include only those resulting from importation from other countries.

N: Not notifiable

U: Unavailable

-: no reported cases

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending April 1, 1995, and April 2, 1994 (13th Week)

| Reporting Area | Pertussis |              |              | Rubella |              |              | Syphilis<br>(Primary & Secondary) |              | Tuberculosis |              | Rabies,<br>Animal |              |
|----------------|-----------|--------------|--------------|---------|--------------|--------------|-----------------------------------|--------------|--------------|--------------|-------------------|--------------|
|                | 1995      | Cum.<br>1995 | Cum.<br>1994 | 1995    | Cum.<br>1995 | Cum.<br>1994 | Cum.<br>1995                      | Cum.<br>1994 | Cum.<br>1995 | Cum.<br>1994 | Cum.<br>1995      | Cum.<br>1994 |
| UNITED STATES  | 55        | 730          | 938          | 1       | 18           | 109          | 4,310                             | 4,730        | 3,251        | 4,185        | 1,580             | 1,654        |
| NEW ENGLAND    | 6         | 81           | 96           | -       | 2            | 77           | 58                                | 49           | 68           | 80           | 464               | 441          |
| Maine          | 1         | 11           | 2            | -       | -            | -            | 4                                 | 1            | -            | -            | -                 | -            |
| N.H.           | -         | 4            | 22           | -       | 1            | -            | 1                                 | -            | 1            | 2            | 62                | 57           |
| Vt.            | -         | 2            | 9            | -       | -            | -            | -                                 | -            | 1            | -            | 58                | 40           |
| Mass.          | 5         | 60           | 57           | -       | 1            | 77           | 18                                | 14           | 31           | 38           | 186               | 174          |
| R.I.           | -         | -            | 2            | -       | -            | -            | 1                                 | 5            | 10           | 8            | 61                | 5            |
| Conn.          | -         | 4            | 4            | -       | -            | -            | 34                                | 29           | 25           | 32           | 97                | 105          |
| MID. ATLANTIC  | 3         | 51           | 193          | 1       | 2            | 4            | 244                               | 350          | 706          | 649          | 414               | 379          |
| Upstate N.Y.   | 2         | 32           | 75           | 1       | 1            | 4            | 18                                | 46           | 55           | 121          | 210               | 255          |
| N.Y. City      | 1         | 10           | 28           | -       | 1            | -            | 134                               | 187          | 371          | 345          | -                 | -            |
| N.J.           | -         | -            | 7            | -       | -            | -            | 50                                | 50           | 132          | 120          | 74                | 78           |
| Pa.            | -         | 9            | 83           | -       | -            | -            | 42                                | 67           | 148          | 63           | 130               | 46           |
| E.N. CENTRAL   | 3         | 68           | 212          | -       | -            | 8            | 1,061                             | 649          | 408          | 450          | 2                 | 6            |
| Ohio           | 1         | 31           | 55           | -       | -            | -            | 237                               | 269          | 69           | 60           | 1                 | -            |
| Ind.           | -         | 4            | 16           | -       | -            | -            | 395                               | 74           | 10           | 40           | -                 | -            |
| Ill.           | -         | 4            | 82           | -       | -            | 4            | 303                               | 131          | 223          | 246          | 1                 | 2            |
| Mich.          | 2         | 29           | 19           | -       | -            | -            | 86                                | 91           | 95           | 94           | -                 | -            |
| Wis.           | -         | -            | 40           | -       | -            | -            | 40                                | 84           | 11           | 10           | -                 | 2            |
| W.N. CENTRAL   | 5         | 28           | 23           | -       | -            | -            | 201                               | 337          | 120          | 82           | 62                | 37           |
| Minns.         | 5         | 5            | 8            | -       | -            | -            | 14                                | 13           | 27           | 21           | 2                 | 1            |
| Iowa           | -         | 1            | 1            | -       | -            | -            | 16                                | 13           | 15           | 7            | 22                | 14           |
| Mo.            | -         | 1            | 7            | -       | -            | -            | 163                               | 283          | 51           | 40           | 10                | 4            |
| N. Dak.        | -         | 5            | -            | -       | -            | -            | -                                 | -            | -            | -            | 6                 | -            |
| S. Dak.        | -         | 4            | -            | -       | -            | -            | -                                 | -            | -            | 6            | 11                | 3            |
| Nebr.          | -         | 3            | 1            | -       | -            | -            | -                                 | 3            | 6            | -            | -                 | -            |
| Kans.          | -         | 7            | 6            | -       | -            | -            | 8                                 | 25           | 21           | 7            | 11                | 15           |
| S. ATLANTIC    | 9         | 76           | 114          | -       | 1            | 5            | 947                               | 1,453        | 542          | 811          | 462               | 459          |
| Del.           | 1         | 4            | -            | -       | -            | -            | 6                                 | 6            | -            | 6            | 10                | 9            |
| Md.            | -         | -            | 36           | -       | -            | -            | 24                                | 67           | 111          | 71           | 104               | 157          |
| D.C.           | -         | 1            | 3            | -       | -            | -            | 38                                | 65           | 21           | 29           | 2                 | 1            |
| Va.            | 7         | 7            | 13           | -       | -            | -            | 175                               | 178          | 6            | 88           | 98                | 92           |
| W. Va.         | -         | -            | 2            | -       | -            | -            | 1                                 | 6            | 27           | 21           | 22                | 16           |
| N.C.           | 1         | 47           | 34           | -       | -            | -            | 278                               | 473          | 46           | 75           | 110               | 43           |
| S.C.           | -         | 7            | 8            | -       | -            | -            | 186                               | 181          | 70           | 106          | 35                | 43           |
| Ga.            | -         | 1            | 6            | -       | -            | -            | 120                               | 234          | 96           | 155          | 69                | 93           |
| Fla.           | -         | 3            | 12           | -       | 1            | 5            | 119                               | 243          | 165          | 260          | 12                | 5            |
| E.S. CENTRAL   | -         | 14           | 34           | -       | 2            | -            | 1,031                             | 480          | 205          | 279          | 39                | 55           |
| Ky.            | -         | -            | 15           | -       | -            | -            | 63                                | 66           | 54           | 78           | 5                 | 2            |
| Tenn.          | -         | 1            | 13           | -       | 2            | -            | 124                               | 244          | -            | 101          | 11                | 28           |
| Ala.           | -         | 13           | 6            | -       | -            | -            | 165                               | 176          | 89           | 100          | 23                | 25           |
| Miss.          | -         | -            | U            | -       | -            | U            | 679                               | U            | 62           | U            | -                 | U            |
| W.S. CENTRAL   | 4         | 20           | 25           | -       | 1            | 4            | 615                               | 1,025        | 245          | 389          | 28                | 183          |
| Ark.           | -         | -            | -            | -       | -            | -            | 159                               | 128          | 35           | 34           | 8                 | 8            |
| La.            | -         | 1            | 2            | -       | -            | -            | 278                               | 512          | -            | -            | 9                 | 30           |
| Okla.          | 2         | 2            | 20           | -       | -            | 4            | 20                                | 40           | 1            | 36           | 11                | 15           |
| Tex.           | 2         | 17           | 3            | -       | 1            | -            | 158                               | 345          | 209          | 319          | -                 | 130          |
| MOUNTAIN       | 15        | 291          | 69           | -       | 2            | -            | 64                                | 143          | 153          | 110          | 17                | 22           |
| Mont.          | -         | 3            | 2            | -       | -            | -            | 3                                 | -            | 3            | -            | 9                 | 3            |
| Idaho          | -         | 25           | 19           | -       | -            | -            | -                                 | 1            | 4            | 4            | -                 | -            |
| Wyo.           | -         | -            | -            | -       | -            | -            | 2                                 | -            | 1            | 1            | -                 | 5            |
| Colo.          | -         | 1            | 34           | -       | -            | -            | 40                                | 46           | 4            | 9            | -                 | -            |
| N. Mex.        | 2         | 9            | 4            | -       | -            | -            | 1                                 | 5            | 22           | 15           | -                 | -            |
| Ariz.          | 13        | 249          | 7            | -       | 2            | -            | 11                                | 80           | 69           | 53           | 7                 | 14           |
| Utah           | -         | 2            | 3            | -       | -            | -            | 4                                 | 5            | 10           | -            | -                 | -            |
| Nev.           | -         | 2            | -            | -       | -            | -            | 3                                 | 6            | 40           | 28           | 1                 | -            |
| PACIFIC        | 10        | 109          | 172          | -       | 8            | 11           | 89                                | 236          | 804          | 1,335        | 92                | 72           |
| Wash.          | 7         | 21           | 27           | -       | -            | -            | 1                                 | 9            | 54           | 55           | -                 | -            |
| Oreg.          | -         | 2            | 18           | -       | 1            | -            | -                                 | 2            | 3            | 34           | -                 | -            |
| Calif.         | -         | 83           | 123          | -       | 7            | 10           | 88                                | 223          | 691          | 1,167        | 91                | 54           |
| Alaska         | -         | -            | -            | -       | -            | -            | -                                 | 1            | 15           | 21           | 1                 | 18           |
| Hawaii         | -         | 3            | 4            | -       | -            | 1            | -                                 | 1            | 41           | 58           | -                 | -            |
| Guam           | U         | -            | -            | U       | -            | -            | 1                                 | 1            | 4            | 7            | -                 | -            |
| P.R.           | -         | 4            | 2            | -       | -            | -            | 71                                | 90           | 23           | 29           | 11                | 21           |
| V.I.           | U         | -            | -            | U       | -            | -            | -                                 | 6            | -            | -            | -                 | -            |
| Amer. Samoa    | -         | -            | 1            | -       | -            | -            | -                                 | -            | 2            | -            | -                 | -            |
| C.N.M.I.       | U         | -            | -            | U       | -            | -            | -                                 | 1            | 1            | 14           | -                 | -            |

U: Unavailable - : no reported cases

TABLE III. Deaths in 121 U.S. cities,\* week ending  
April 1, 1995 (13th Week)

| Reporting Area      | All Causes, By Age (Years) |       |       |       |      |    | P&I <sup>†</sup><br>Total | Reporting Area        | All Causes, By Age (Years) |       |       |       |      |     | P&I <sup>†</sup><br>Total |
|---------------------|----------------------------|-------|-------|-------|------|----|---------------------------|-----------------------|----------------------------|-------|-------|-------|------|-----|---------------------------|
|                     | All<br>Ages                | ≥85   | 45-64 | 25-44 | 1-24 | <1 |                           |                       | All<br>Ages                | ≥85   | 45-64 | 25-44 | 1-24 | <1  |                           |
| NEW ENGLAND         | 677                        | 494   | 101   | 54    | 18   | 10 | 50                        | S. ATLANTIC           | 1,492                      | 920   | 300   | 190   | 45   | 34  | 100                       |
| Boston, Mass.       | 194                        | 132   | 29    | 24    | 7    | 2  | 18                        | Atlanta, Ga.          | 201                        | 128   | 39    | 28    | 4    | 2   | 5                         |
| Bridgeport, Conn.   | 38                         | 31    | 5     | 1     | 1    | -  | 1                         | Baltimore, Md.        | 343                        | 201   | 68    | 57    | 10   | 6   | 36                        |
| Cambridge, Mass.    | 16                         | 12    | 2     | 2     | -    | -  | 1                         | Charlotte, N.C.       | 51                         | 26    | 16    | 8     | -    | 1   | 1                         |
| Fall River, Mass.   | 21                         | 16    | 2     | 2     | 1    | -  | -                         | Jacksonville, Fla.    | 132                        | 84    | 30    | 8     | 6    | 4   | 10                        |
| Hartford, Conn.     | 62                         | 36    | 13    | 8     | 1    | -  | -                         | Miami, Fla.           | 100                        | 65    | 19    | 13    | 2    | 1   | -                         |
| Lowell, Mass.       | 24                         | 20    | 2     | 2     | -    | -  | 1                         | Norfolk, Va.          | 72                         | 48    | 14    | 9     | 1    | -   | 8                         |
| Lynn, Mass.         | 17                         | 15    | 1     | -     | 1    | -  | -                         | Richmond, Va.         | 81                         | 48    | 17    | 10    | 4    | 2   | 3                         |
| New Bedford, Mass.  | 26                         | 24    | -     | 2     | -    | -  | 2                         | Savannah, Ga.         | 52                         | 35    | 13    | 2     | 1    | 1   | 4                         |
| New Haven, Conn.    | 62                         | 42    | 13    | 3     | 2    | 2  | 5                         | St. Petersburg, Fla.  | 64                         | 42    | 14    | 4     | 1    | 3   | 5                         |
| Providence, R.I.    | 81                         | 47    | 10    | 3     | 2    | -  | 5                         | Tampa, Fla.           | 217                        | 151   | 34    | 22    | 6    | 3   | 23                        |
| Somerville, Mass.   | 11                         | 7     | 3     | -     | 1    | -  | -                         | Washington, D.C.      | 163                        | 84    | 29    | 29    | 10   | 11  | 5                         |
| Springfield, Mass.  | 56                         | 39    | 11    | 4     | 1    | 1  | 6                         | Wilmington, Del.      | 18                         | 8     | 7     | -     | -    | -   | -                         |
| Waterbury, Conn.    | 17                         | 11    | 3     | 2     | -    | -  | 1                         | E.S. CENTRAL          | 861                        | 588   | 143   | 87    | 25   | 18  | 72                        |
| Worcester, Mass.    | 72                         | 62    | 7     | 2     | 1    | -  | 10                        | Birmingham, Ala.      | 136                        | 76    | 32    | 17    | 5    | 6   | 4                         |
| MID. ATLANTIC       | 2,234                      | 1,468 | 428   | 254   | 37   | 47 | 116                       | Chattanooga, Tenn.    | 79                         | 63    | 10    | 4     | 2    | -   | 7                         |
| Albany, N.Y.        | 56                         | 40    | 13    | 2     | -    | -  | 2                         | Knoxville, Tenn.      | 99                         | 73    | 18    | 4     | 3    | 1   | 13                        |
| Allentown, Pa.      | U                          | U     | U     | U     | U    | U  | U                         | Lexington, Ky.        | 68                         | 52    | 8     | 6     | 1    | 1   | 6                         |
| Buffalo, N.Y.       | 95                         | 78    | 13    | 1     | 1    | 2  | -                         | Memphis, Tenn.        | 196                        | 145   | 24    | 21    | 4    | 2   | 25                        |
| Camden, N.J.        | 22                         | 11    | 4     | 4     | 3    | -  | 1                         | Mobile, Ala.          | 71                         | 46    | 14    | 8     | 2    | 1   | 4                         |
| Elizabeth, N.J.     | 28                         | 14    | 9     | 4     | 1    | -  | 1                         | Montgomery, Ala.      | 48                         | 29    | 9     | 8     | 1    | 1   | 1                         |
| Erie, Pa.           | 52                         | 45    | 4     | 2     | 1    | -  | 8                         | Nashville, Tenn.      | 164                        | 104   | 28    | 19    | 7    | 6   | 12                        |
| Jersey City, N.J.   | 43                         | 26    | 5     | 8     | 2    | -  | 2                         | W.S. CENTRAL          | 1,590                      | 1,019 | 308   | 178   | 58   | 31  | 100                       |
| New York City, N.Y. | 1,343                      | 838   | 284   | 176   | 18   | 27 | 54                        | Austin, Tex.          | 85                         | 50    | 14    | 15    | 5    | 1   | 7                         |
| Newark, N.J.        | 91                         | 40    | 20    | 25    | 1    | 5  | 8                         | Baton Rouge, La.      | 42                         | 29    | 6     | 7     | -    | -   | -                         |
| Peterborough, N.J.  | 28                         | 19    | 6     | 2     | -    | -  | 1                         | Corpus Christi, Tex.  | 46                         | 38    | 3     | 6     | 1    | -   | -                         |
| Philadelphia, Pa.   | U                          | U     | U     | U     | U    | U  | U                         | Dallas, Tex.          | 212                        | 119   | 52    | 29    | 8    | 3   | 3                         |
| Pittsburgh, Pa.     | 60                         | 44    | 7     | 3     | 3    | 3  | 5                         | El Paso, Tex.         | 76                         | 51    | 17    | 5     | 1    | 4   | 3                         |
| Reading, Pa.        | 15                         | 12    | -     | 1     | 2    | -  | -                         | Ft. Worth, Tex.       | 123                        | 76    | 24    | 12    | 6    | 5   | 2                         |
| Rochester, N.Y.     | 144                        | 112   | 20    | 9     | 3    | -  | 13                        | Houston, Tex.         | 362                        | 216   | 81    | 42    | 15   | 8   | 40                        |
| Schenectady, N.Y.   | 28                         | 25    | 3     | -     | -    | -  | 4                         | Little Rock, Ark.     | 82                         | 63    | 13    | 4     | 2    | -   | 7                         |
| Scranton, Pa.       | 37                         | 35    | 2     | -     | -    | -  | 3                         | New Orleans, La.      | 124                        | 77    | 23    | 16    | 5    | 3   | -                         |
| Syracuse, N.Y.      | 111                        | 75    | 23    | 8     | 2    | 3  | 9                         | San Antonio, Tex.     | 218                        | 146   | 36    | 19    | 11   | 6   | 18                        |
| Trenton, N.J.       | 31                         | 18    | 4     | 6     | -    | 3  | 5                         | Shreveport, La.       | 74                         | 51    | 16    | 4     | 2    | 1   | 8                         |
| Utica, N.Y.         | 24                         | 19    | 4     | 1     | -    | -  | 1                         | Tulsa, Okla.          | 142                        | 103   | 21    | 17    | 1    | -   | 14                        |
| Yonkers, N.Y.       | 26                         | 17    | 7     | 2     | -    | -  | 1                         | MOUNTAIN              | 895                        | 608   | 150   | 90    | 26   | 20  | 85                        |
| E.N. CENTRAL        | 2,483                      | 1,555 | 482   | 253   | 120  | 73 | 182                       | Albuquerque, N.M.     | 102                        | 79    | 12    | 6     | 2    | 3   | 4                         |
| Akron, Ohio         | 38                         | 29    | 6     | 1     | 1    | -  | -                         | Colo. Springs, Colo.  | 54                         | 41    | 6     | 5     | 1    | 1   | 8                         |
| Canton, Ohio        | 36                         | 27    | 8     | -     | 1    | -  | 3                         | Denver, Colo.         | 137                        | 93    | 18    | 16    | 6    | 6   | 15                        |
| Chicago, Ill.       | 576                        | 261   | 119   | 109   | 68   | 19 | 28                        | Las Vegas, Nev.       | 181                        | 116   | 48    | 13    | 4    | -   | 11                        |
| Cincinnati, Ohio    | 195                        | 140   | 38    | 8     | 4    | 5  | 25                        | Ogden, Utah           | 29                         | 22    | 2     | 2     | 2    | 1   | 4                         |
| Cleveland, Ohio     | 196                        | 121   | 49    | 18    | 4    | 4  | 6                         | Phoenix, Ariz.        | 152                        | 97    | 24    | 22    | 5    | 3   | 5                         |
| Columbus, Ohio      | 175                        | 113   | 36    | 15    | 6    | 5  | 15                        | Pueblo, Colo.         | 18                         | 11    | 3     | 3     | -    | 1   | 2                         |
| Dayton, Ohio        | 133                        | 95    | 18    | 9     | 7    | 4  | 16                        | Salt Lake City, Utah  | 83                         | 47    | 23    | 6     | 4    | 3   | 9                         |
| Detroit, Mich.      | 242                        | 153   | 40    | 28    | 9    | 12 | 13                        | Tucson, Ariz.         | 139                        | 102   | 16    | 17    | 2    | 2   | 9                         |
| Evansville, Ind.    | 57                         | 40    | 11    | 4     | 1    | 1  | 2                         | PACIFIC               | 2,005                      | 1,333 | 326   | 206   | 67   | 41  | 178                       |
| Fort Wayne, Ind.    | 68                         | 52    | 8     | 3     | 2    | 3  | 10                        | Berkeley, Calif.      | 19                         | 11    | 6     | -     | 1    | 1   | 1                         |
| Gary, Ind.          | 31                         | 12    | 13    | 6     | -    | -  | 3                         | Fresno, Calif.        | 78                         | 54    | 10    | 5     | 5    | 2   | 2                         |
| Grand Rapids, Mich. | 56                         | 35    | 13    | 3     | 4    | 1  | 10                        | Glendale, Calif.      | 513                        | 346   | 75    | 63    | 17   | 5   | 35                        |
| Indianapolis, Ind.  | 208                        | 138   | 42    | 18    | 4    | 6  | 16                        | Honolulu, Hawaii      | 82                         | 56    | 17    | 4     | 2    | 3   | 7                         |
| Madison, Wis.       | 40                         | 30    | 5     | 4     | 1    | -  | 8                         | Long Beach, Calif.    | 97                         | 69    | 10    | 12    | 2    | 4   | 10                        |
| Milwaukee, Wis.     | 106                        | 83    | 14    | 1     | 1    | 7  | 10                        | Los Angeles, Calif.   | 27                         | 20    | 5     | 1     | -    | 1   | 1                         |
| Peoria, Ill.        | 39                         | 23    | 8     | 6     | 1    | 1  | 5                         | Pasadena, Calif.      | 30                         | 19    | 5     | 2     | 2    | 2   | 5                         |
| Rockford, Ill.      | 59                         | 39    | 14    | 5     | 1    | -  | 4                         | Portland, Oreg.       | 103                        | 73    | 12    | 13    | 4    | 1   | 7                         |
| South Bend, Ind.    | 57                         | 45    | 9     | 3     | 1    | -  | 4                         | Sacramento, Calif.    | 178                        | 114   | 35    | 16    | 6    | 5   | 16                        |
| Toledo, Ohio        | 107                        | 73    | 21    | 7     | 3    | 3  | 5                         | San Diego, Calif.     | 182                        | 97    | 31    | 36    | 13   | 2   | 19                        |
| Youngstown, Ohio    | 64                         | 46    | 10    | 5     | 2    | 1  | 3                         | San Francisco, Calif. | 166                        | 102   | 27    | 13    | 2    | -   | 20                        |
| W.N. CENTRAL        | 804                        | 581   | 127   | 39    | 22   | 19 | 58                        | San Jose, Calif.      | 173                        | 114   | 34    | 15    | 3    | 7   | 17                        |
| Des Moines, Iowa    | 54                         | 38    | 13    | 2     | -    | 1  | 5                         | Santa Cruz, Calif.    | 26                         | 21    | 3     | 1     | 1    | -   | 8                         |
| Duluth, Minn.       | 26                         | 21    | 4     | -     | 1    | -  | 3                         | Seattle, Wash.        | 166                        | 116   | 25    | 16    | 6    | 5   | 8                         |
| Kansas City, Kans.  | 33                         | 27    | 3     | 1     | -    | 2  | 1                         | Spokane, Wash.        | 64                         | 47    | 11    | 4     | 1    | 1   | 7                         |
| Kansas City, Mo.    | 119                        | 81    | 14    | 4     | 4    | 1  | 11                        | Tacoma, Wash.         | 103                        | 74    | 20    | 5     | 2    | 2   | 15                        |
| Lincoln, Nebr.      | 31                         | 22    | 5     | 1     | 1    | 2  | 2                         | TOTAL                 | 13,041 <sup>§</sup>        | 8,566 | 2,363 | 1,349 | 418  | 293 | 921                       |
| Minneapolis, Minn.  | 178                        | 128   | 27    | 15    | 4    | 4  | 8                         |                       |                            |       |       |       |      |     |                           |
| Omaha, Nebr.        | 88                         | 62    | 18    | 2     | 4    | 2  | 3                         |                       |                            |       |       |       |      |     |                           |
| St. Louis, Mo.      | 138                        | 106   | 19    | 6     | 5    | 2  | 19                        |                       |                            |       |       |       |      |     |                           |
| St. Paul, Minn.     | 68                         | 52    | 8     | 3     | 2    | 3  | 4                         |                       |                            |       |       |       |      |     |                           |
| Wichita, Kans.      | 69                         | 44    | 16    | 5     | 1    | 2  | 2                         |                       |                            |       |       |       |      |     |                           |

\*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

<sup>†</sup>Pneumonia and influenza.

<sup>§</sup>Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

U Total includes unknown ages.

U: Unavailable -> no reported cases

*International Classification of Diseases Coding — Continued**References*

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### **Sociodemographic and Behavioral Characteristics Associated with Alcohol Consumption During Pregnancy — United States, 1988**

Identification of women at risk for consuming alcohol during pregnancy is critical to the design of interventions for reducing the adverse effects of alcohol on both women and their children. This report uses data from the 1988 National Maternal and Infant Health Survey (NMIHS)—the most recent vital records survey for which a population-based sample of this size was available—conducted by CDC's National Center for Health Statistics to analyze characteristics of women who drink alcohol during pregnancy.

The NMIHS was a mail survey of a stratified systematic sample of 13,417 women who had a live-born infant during 1988 (1); data from the survey became available in 1991. A total of 9953 (74%) responded. Maternal characteristics analyzed included age, race/ethnicity, education, household income, marital status, parity, smoking status, prenatal care, and alcohol drinking patterns during the 3 months before respondents learned of their pregnancy and during their pregnancy (i.e., prenatal drinkers)\*. Data were further analyzed for women who reported having had six or more drinks per week during their pregnancy (i.e., frequent drinkers). The sample data were weighted to reflect general population estimates, and standard errors were calculated using SUDAAN (2).

Overall, 45.4% of the respondents reported drinking alcohol during the 3 months before they learned of their pregnancy, 20.7% reported drinking alcohol after they learned of their pregnancy, 16.8% reported drinking three or fewer drinks per month during pregnancy, and 0.6% reported having had six or more drinks per week during pregnancy.

The likelihood of any reported prenatal drinking increased directly with age through age group 30-34 years (Table 1). The race/ethnicity-specific proportion of prenatal drinkers was highest among white, non-Hispanic women (25.4% [95% confidence interval (CI)=23.9%-27.0%]). The likelihood of prenatal drinking was higher

\*Women who responded yes to "Did you drink any alcoholic beverages during the 12 months before your delivery?" were asked "How many drinks did you have on average during the 3 months before you found out you were pregnant?" and "How many drinks did you have on average after you found out you were pregnant?" One drink was defined as 12 oz of beer, 4 oz of wine, or 1½ oz of liquor.

*Alcohol Consumption During Pregnancy — Continued*

among women with  $\geq 16$  years of education (30.8% [95% CI=28.3%–33.2%]) than among women in other educational groups and higher among women with annual household incomes of  $\geq \$40,000$  (29.1% [95% CI=26.5%–31.7%]) compared with women in other income groups. Prenatal drinking was reported by 38.2% (95% CI=33.5%–42.9%) of women who smoked  $>10$  cigarettes a day and by 17.2% (95% CI=16.0%–18.4%) of women who were nonsmokers.

Frequent prenatal drinking was more prevalent among women aged  $\geq 35$  years (1.4% [95% CI=0.2%–2.5%]) than among younger women (Table 1). The race/ethnicity-specific proportion of frequent drinkers was higher among all racial/ethnic groups

**TABLE 1. Percentage of women who self-reported drinking alcohol during pregnancy, by selected characteristics — National Maternal and Infant Health Survey, United States, 1988**

| Characteristic                                   | Prenatal* drinkers (n=1738) |                       | Frequent† drinkers (n=102) |                    |
|--|-----------------------------|-----------------------|----------------------------|--------------------|
|  | %                           | (95% CI) <sup>‡</sup> | %                          | (95% CI)           |
| <b>Age group (yrs)</b>                           |                             |                       |                            |                    |
| $\leq 19$  | 9.5                         | ( 7.2%–11.9%)         | 0.2                        | (0.1%–0.3%)        |
| 20–24  | 16.7                        | (14.6%–18.7%)         | 0.7                        | (0.3%–1.2%)        |
| 25–29  | 22.9                        | (20.8%–25.0%)         | 0.4                        | (0.1%–0.8%)        |
| 30–34  | 28.7                        | (25.9%–31.5%)         | 0.6                        | (0.2%–1.1%)        |
| $\geq 35$  | 21.9                        | (17.8%–26.0%)         | 1.4                        | (0.2%–2.5%)        |
| <b>Race/Ethnicity</b>                            |                             |                       |                            |                    |
| White, non-Hispanic                              | 25.4                        | (23.9%–27.0%)         | 0.5                        | (0.2%–0.7%)        |
| White, Hispanic                                  | 10.6                        | ( 7.9%–13.3%)         | 0.3                        | (0 –0.6%)          |
| Black, non-Hispanic                              | 12.2                        | (11.2%–13.1%)         | 1.1                        | (0.8%–1.5%)        |
| Black, Hispanic                                  | 8.2                         | ( 3.5%–12.9%)         | 1.1                        | (0 –2.8%)          |
| Other <sup>§</sup>                               | 10.0                        | ( 6.0%–13.9%)         | 1.1                        | (0 –2.5%)          |
| <b>Education (yrs)</b>                           |                             |                       |                            |                    |
| 0–11   | 10.5                        | ( 8.7%–12.3%)         | 0.7                        | (0.3%–1.1%)        |
| 12   | 18.7                        | (17.0%–20.4%)         | 0.6                        | (0.3%–0.9%)        |
| 13–15  | 24.8                        | (22.3%–27.3%)         | 0.3                        | (0 –0.7%)          |
| $\geq 16$  | 30.8                        | (28.3%–33.2%)         | 0.6                        | (0 –1.2%)          |
| <b>Total annual household income</b>             |                             |                       |                            |                    |
| $< \$10,000$                                     | 17.1                        | (15.0%–19.2%)         | 1.3                        | (0.7%–1.9%)        |
| $\$10,000$ – $\$24,999$                          | 15.8                        | (14.0%–17.7%)         | 0.4                        | (0.1%–0.7%)        |
| $\$25,000$ – $\$39,999$                          | 21.9                        | (19.5%–24.4%)         | 0.3                        | (0 –0.5%)          |
| $\geq \$40,000$                                  | 29.1                        | (26.5%–31.7%)         | 0.4                        | (0.1%–0.7%)        |
| <b>Marital status</b>                            |                             |                       |                            |                    |
| Married  | 22.1                        | (20.7%–23.5%)         | 0.4                        | (0.2%–0.6%)        |
| Unmarried  | 16.7                        | (14.8%–18.7%)         | 1.0                        | (0.5%–1.5%)        |
| <b>Parity</b>                                    |                             |                       |                            |                    |
| 1  | 20.5                        | (18.8%–22.1%)         | 0.4                        | (0.1%–0.6%)        |
| 2  | 20.5                        | (18.5%–22.6%)         | 0.5                        | (0.2%–0.8%)        |
| $\geq 3$   | 21.9                        | (19.5%–24.2%)         | 1.1                        | (0.6%–1.7%)        |
| <b>Cigarette smoking status during pregnancy</b> |                             |                       |                            |                    |
| 0  | 17.2                        | (16.0%–18.4%)         | 0.2                        | (0.1%–0.4%)        |
| 1–10 per day                                     | 30.0                        | (26.6%–33.4%)         | 1.2                        | (0.6%–1.9%)        |
| $> 10$ per day                                   | 38.2                        | (33.5%–42.9%)         | 2.7                        | (1.3%–4.1%)        |
| <b>Prenatal care</b>                             |                             |                       |                            |                    |
| Yes  | 20.7                        | (19.6%–21.9%)         | 0.6                        | (0.4%–0.8%)        |
| No   | 20.6                        | (13.1%–28.2%)         | 2.2                        | (0.9%–3.6%)        |
| <b>Total</b>                                     | <b>20.7</b>                 | <b>(19.6%–21.9%)</b>  | <b>0.6</b>                 | <b>(0.4%–0.8%)</b> |

\* Women who reported drinking at any time during pregnancy.

† Women who reported consuming six or more drinks per week during pregnancy. One drink was defined as 12 oz of beer, 4 oz of wine or 1½ oz of liquor.

‡ Confidence interval.

§ Number of women in other specific racial/ethnic groups was too small for meaningful analysis.



*Alcohol Consumption During Pregnancy — Continued*

other than white. The likelihood of frequent drinking was higher among women with annual household incomes  $\leq \$10,000$  (1.3% [95% CI=0.7%–1.9%]). The proportion of frequent drinkers increased as smoking level increased, and was more than three times higher among women receiving no prenatal care than among those who received prenatal care (2.2% [95% CI=0.9%–3.6%] compared with 0.6% [95% CI=0.4%–0.8%]).

*Reported by: Fetal Alcohol Syndrome Prevention Section, Developmental Disabilities Br, Div of Birth Defects and Developmental Disabilities, National Center for Environmental Health; Follow-back Survey Br, Div of Vital Statistics, National Center for Health Statistics, CDC.*

**Editorial Note:** An advisory both for women who are pregnant and for those trying to become pregnant not to drink alcohol was issued by the U.S. Surgeon General in 1981 (3) and was reiterated in 1990 by the Secretary of Health and Human Services (4). Although only a small proportion of the population surveyed reported frequent drinking during pregnancy, analyses of risk factors suggest these women have some different sociodemographic characteristics than those of all women who drink during pregnancy; however, the number of frequent drinkers in the survey was small, producing unstable population estimates that require further evaluation. The findings in this report are consistent with selected findings in previous studies (5,6) and can assist in targeting programs for the prevention of maternal alcohol consumption during pregnancy.

The findings in this report are subject to at least three limitations. First, alcohol drinking was self-reported and could not be verified. Disclosure of prenatal alcohol consumption may have been underreported because of increasing awareness of the dangers of alcohol consumption during pregnancy (7). Second, NMIHS data do not include a question about "binge" drinking (i.e., consuming five or more drinks on any one occasion), which has been associated with neurodevelopmental deficits (8). Third, drinking patterns may have changed since these data were collected. Analyses of more recent data from CDC's Behavioral Risk Factor Surveillance System may provide information about recent trends in maternal alcohol consumption during pregnancy.

The high prevalence of alcohol drinking by women during pregnancy in 1988 (21%) underscores the need to sustain efforts by public health agencies and health-care providers to advise women against drinking if they are trying to become pregnant or are likely to become pregnant. Although in this study frequent alcohol drinkers were a small proportion of all women who consumed alcohol during pregnancy, they are at greater risk than infrequent drinkers for delivering infants with alcohol-related disorders (9,10). Although previous studies documented adverse fetal effects of prenatal alcohol at relatively high thresholds, more recent studies have found adverse physical and neurobehavioral effects at lower exposure levels. Population-based surveys that oversample women with characteristics described in this and other studies may assist in better defining women who drink alcohol frequently during pregnancy because they may account for a disproportionately larger number of children affected by in utero alcohol exposure.

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Notice to Readers**Licensure of Varicella Virus Vaccine, Live**

On March 17, 1995, the Food and Drug Administration licensed Varicella Virus Vaccine, Live (VARIVAX<sup>®</sup>), manufactured and distributed by Merck and Co., Inc., (Rahway, New Jersey). This vaccine has been licensed for use in persons aged  $\geq 12$  months. The recommended dose for susceptible children aged 12 months-12 years is one 0.5 mL dose administered subcutaneously. The recommended dosage for susceptible adolescents aged  $\geq 13$  years and adults is two 0.5 mL doses of vaccine 4-8 weeks apart.

The recommendations of the Advisory Committee on Immunization Practices on the use of varicella vaccine will be published.

Reported by: Center for Biologics Evaluation and Research, Food and Drug Administration. National Immunization Program, CDC.

Notice to Readers**NIOSH Alert: Request for Assistance  
in Preventing Injuries and Deaths of Loggers**

CDC's National Institute for Occupational Safety and Health (NIOSH) periodically issues alerts on workplace hazards that have caused death, serious injury, or illness to workers. One such alert, *Request for Assistance in Preventing Injuries and Deaths of Loggers* (1), was recently published and is available to the public.\*

This alert warns workers in the logging industry that they are at high risk for injury and death if they do not use proper safety procedures and equipment. The National

\*Single copies of this document are available without charge from the Publications Office, Division of Standards Development and Technology Transfer, NIOSH, CDC, Mailstop C-13, 4676 Columbia Parkway, Cincinnati, OH 45226-1998; telephone (800) 356-4674 ([513] 533-8328 for persons outside the United States); fax (513) 533-8573.

*Notices to Readers — Continued*

Traumatic Occupational Fatalities Surveillance System indicates that during 1980–1989, approximately 6400 U.S. workers died each year from traumatic injuries in the workplace. During this time, an estimated 1492 of these deaths occurred in the logging industry, where the average annual fatality rate is more than 23 times that for all U.S. workers (164 deaths per 100,000 workers, compared with seven per 100,000). Most of these logging-associated deaths occurred in four occupational groups: logging (e.g., fellers, limbers, buckers, and choker setters), truck drivers, general laborers, and material machine operators. In addition, the Bureau of Labor Statistics reported in 1992 that logging had a workplace injury rate of more than 14,000 injuries per 100,000 full-time workers, compared with 8000 per 100,000 for the total private sector.

The alert describes six fatal incidents that involved workers in the logging industry during October 1991–May 1993 and provides recommendations for workers and employers to prevent logging-related deaths and injuries.

*Reference*

1. NIOSH. Request for assistance in preventing injuries and deaths of loggers. Cincinnati: US Department of Health and Human Services, Public Health Service, CDC, 1994; DHHS publication no. (NIOSH)94-101.

*Notice to Readers***1995 Institute: Frontiers in Laboratory Practice Research**

CDC is sponsoring the 1995 Institute, "Frontiers in Laboratory Practice Research," in Atlanta, October 1–3. The Institute will include research strategies and methods for addressing major issues in laboratory practice. Abstracts for poster presentations will be accepted until July 28 in the following areas: Personnel, Proficiency Testing, Quality Assurance, Detection of Problems Affecting Patient Outcome, Establishing Analytical Performance Goals, Measuring the Impact of Change on Laboratory Testing, Laboratory-Focused Health Systems Research, and Establishing Medically Relevant Performance Goals for the Laboratory. The registration deadline is September 1.

Registration and abstract submission information are available from the Meeting Manager, Division of Laboratory Systems, Public Health Practice Program Office, CDC, Mailstop G-23, 4770 Buford Highway, Atlanta, GA, 30341-3724; telephone (404) 488-7680.

### Monthly Immunization Table

To track progress toward achieving the goals of the Childhood Immunization Initiative (CII), CDC publishes monthly a tabular summary of the number of cases of all diseases preventable by routine childhood vaccination reported during the previous month and year-to-date (provisional data). In addition, the table compares provisional data with final data for the previous year and highlights the number of reported cases among children aged <5 years, who are the primary focus of CII. Data in the table are derived from CDC's National Notifiable Diseases Surveillance System.

#### Number of reported cases of diseases preventable by routine childhood vaccination — United States, February 1995 and 1994–1995\*

| Disease                           | No. cases,<br>February<br>1995 | Total cases<br>January–February |      | No. cases among<br>children aged <5 years† |      |
|-----------------------------------|--------------------------------|---------------------------------|------|--|------|
|                                   |                                | 1994                            | 1995 | 1994                                       | 1995 |
| Congenital rubella syndrome (CRS) | 1                              | 2                               | 2    | 2  | 2    |
| Diphtheria                        | 0                              | 0                               | 0    | 0  | 0    |
| <i>Haemophilus influenzae</i> ‡   | 122                            | 190                             | 231  | 44   | 53   |
| Hepatitis B†                      | 563                            | 1722                            | 1026 | 26   | 4    |
| Measles                           | 26                             | 43                              | 31   | 4  | 17   |
| Mumps                             | 44                             | 216                             | 101  | 26   | 19   |
| Pertussis                         | 238                            | 624                             | 410  | 262  | 221  |
| Poliomyelitis, paralytic**        | 0                              | 0                               | 0    | 0  | 0    |
| Rubella                           | 4                              | 39                              | 11   | 5  | 3    |
| Tetanus                           | 2                              | 4                               | 3    | 0  | 0    |

\*Data for 1994 and 1995 are provisional.

†For 1994 and 1995, age data were available for ≥86% of cases.

‡Invasive disease; *H. influenzae* serotype is not routinely reported to the National Notifiable Diseases Surveillance System. Of 53 cases among children aged <5 years, serotype was reported for 10 cases, and of those, five were type b, the only serotype of *H. influenzae* preventable by vaccination.

†Because most hepatitis B virus infections among infants and children aged <5 years are asymptomatic (although likely to become chronic), acute disease surveillance does not reflect the incidence of this problem in this age group or the effectiveness of hepatitis B vaccination in infants.

\*\*One case with onset in 1994 has been confirmed; this case was vaccine-associated. An additional six suspected cases are under investigation. In 1993, three of 10 suspected cases were confirmed; two of the confirmed cases were vaccine-associated, and one was imported. The imported case occurred in a 2-year-old Nigerian child brought to the United States for care of his paralytic illness; no poliovirus was isolated from the child.



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